

This Page Is Inserted by IFW Operations
and is not a part of the Official Record

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

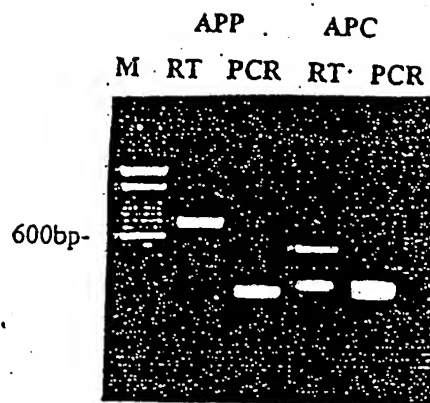
Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

IMAGES ARE BEST AVAILABLE COPY.

**As rescanning documents *will not* correct images,
please do not report the images to the
Image Problem Mailbox.**

A



B

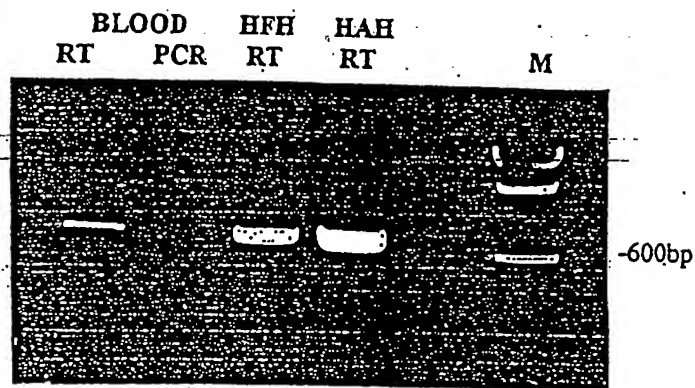


FIGURE 1

1 2 3 4 5 6 7 8



FIGURE 2

1 2 3 4

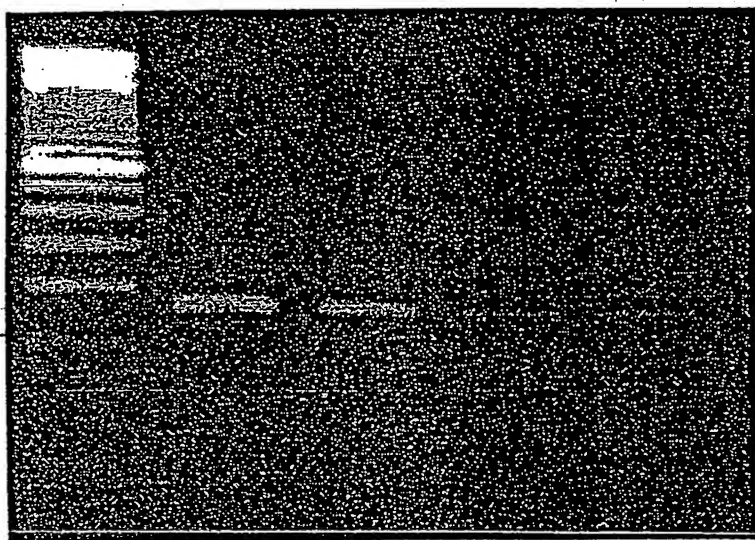


FIGURE 3

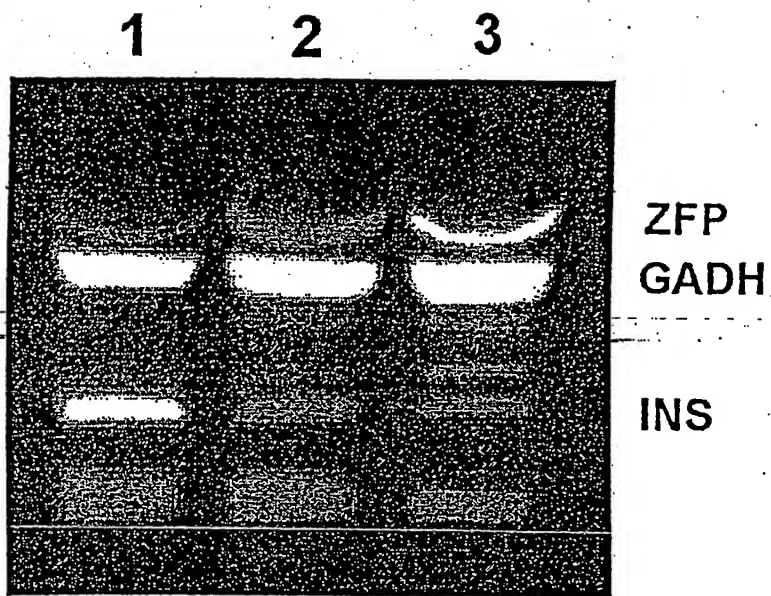
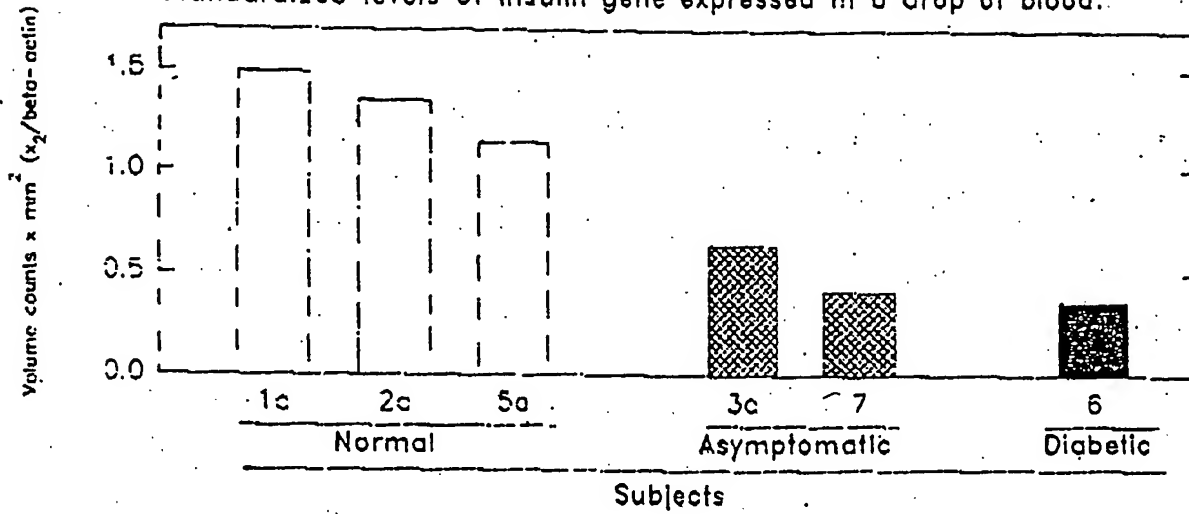
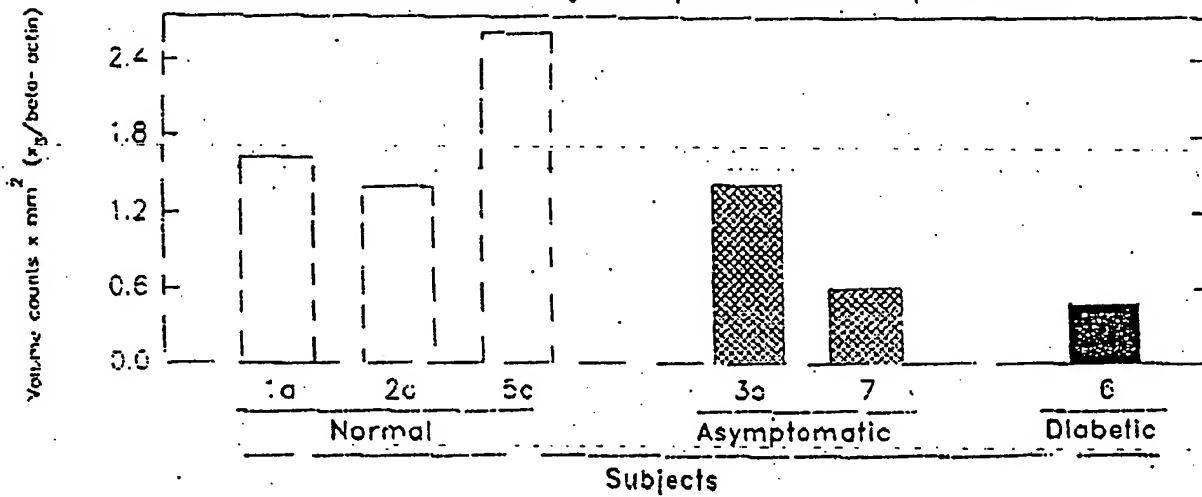


FIGURE 4

A. Standardized levels of Insulin gene expressed in a drop of blood.



B. Standardized levels of ZFP gene expressed in a drop of blood.



C. Standardized levels of insulin gene expressed in each fractionated cell from whole blood.

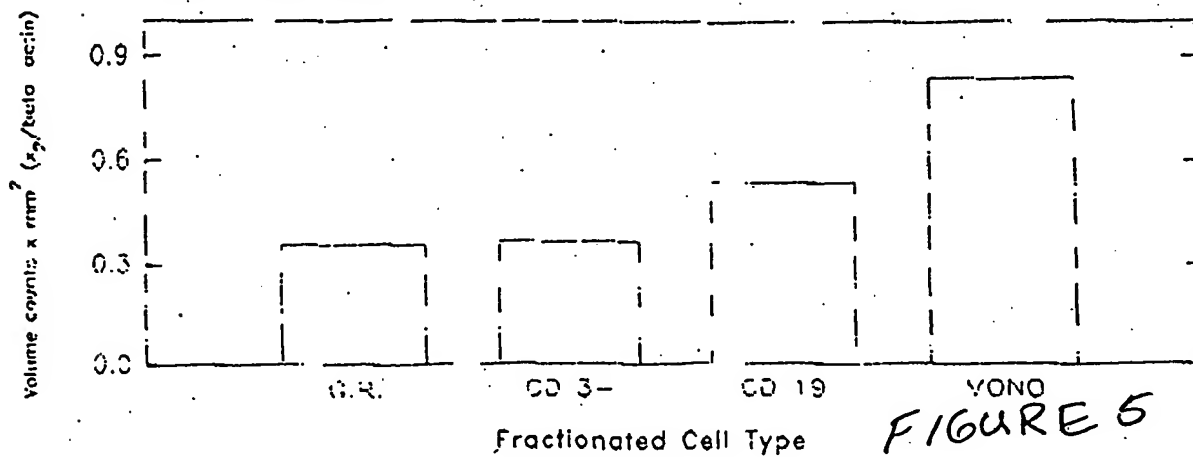
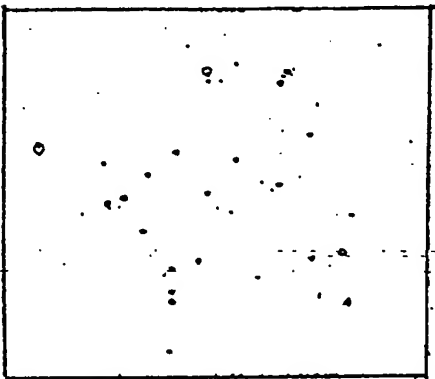
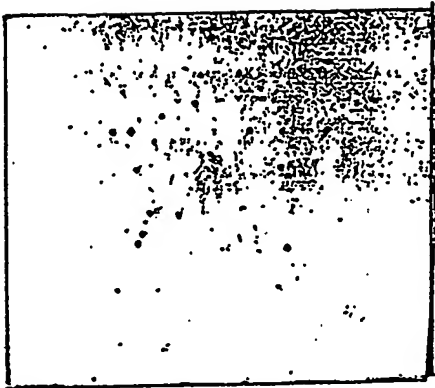


FIGURE 5

A



B

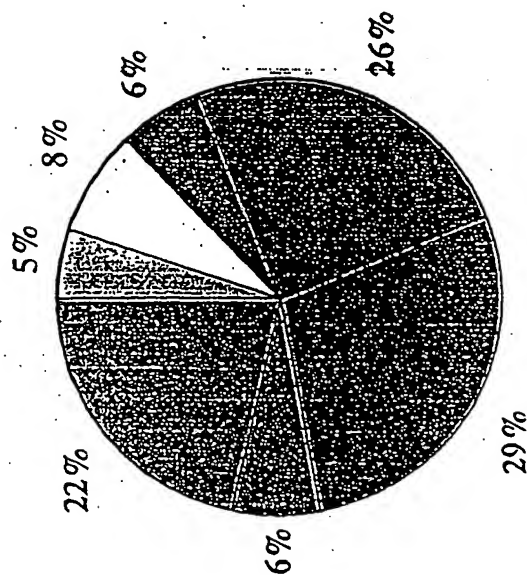


FIGURE 6

Total :13, 283 ESTs
 Known: 6,283
 Mitochondrial: 405
 Ribosome: 498
 Repeat: 868
 Mis. : 156
 Novel: 2,718

- ☒ Cell Division
- ☐ Cell Signalling/Communication
- ☒ Cell structure/Motility
- ☒ Cell/organism defense
- ☒ Gene/Protein expression
- ☒ Metabolism
- ☒ Unclassified

Human Blood



Human Fetal Heart

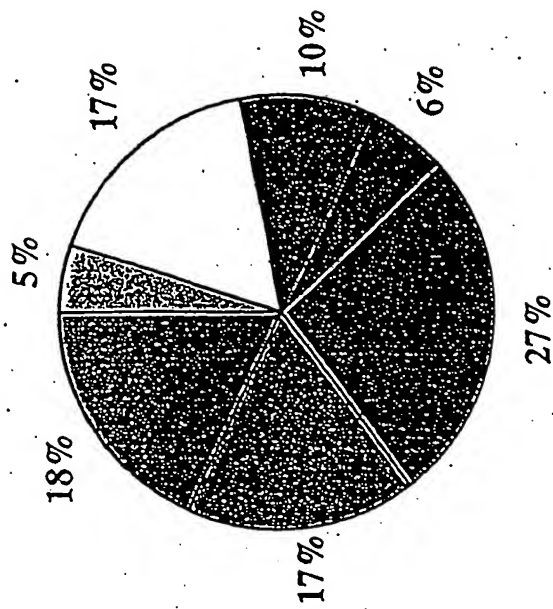
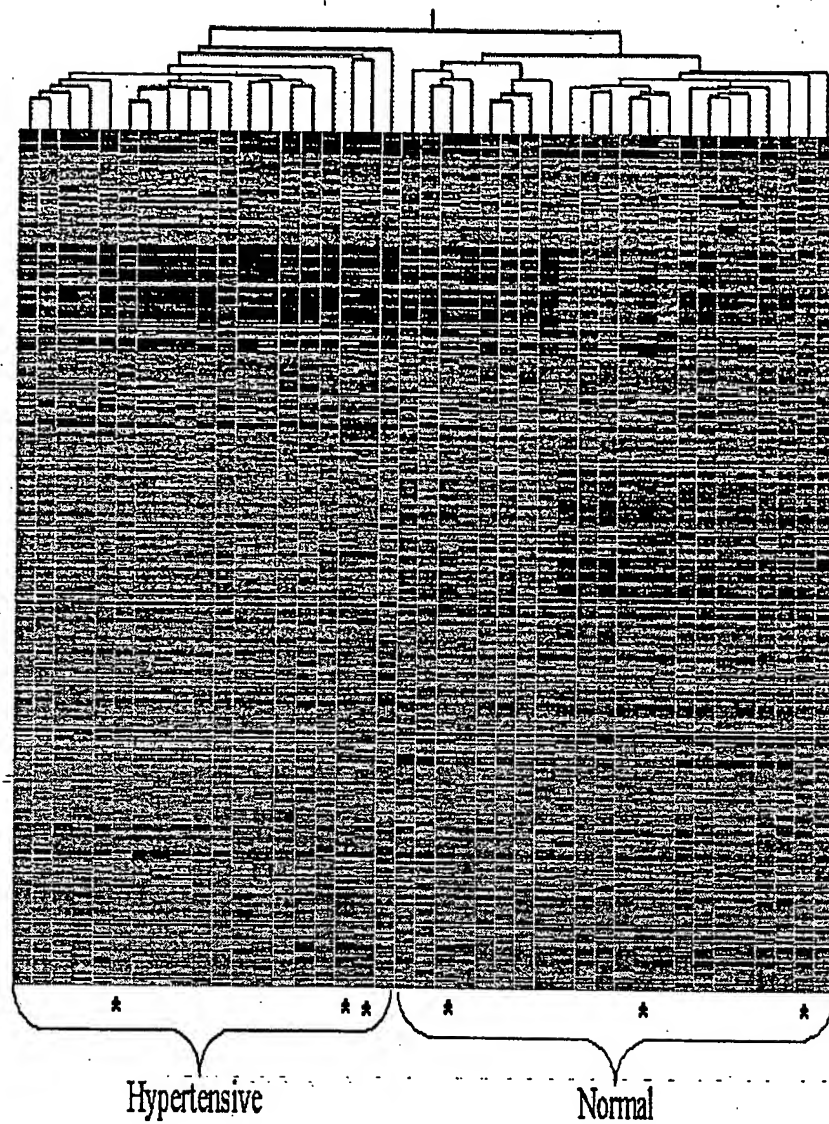


FIGURE 7

Figure 8

Hypertension



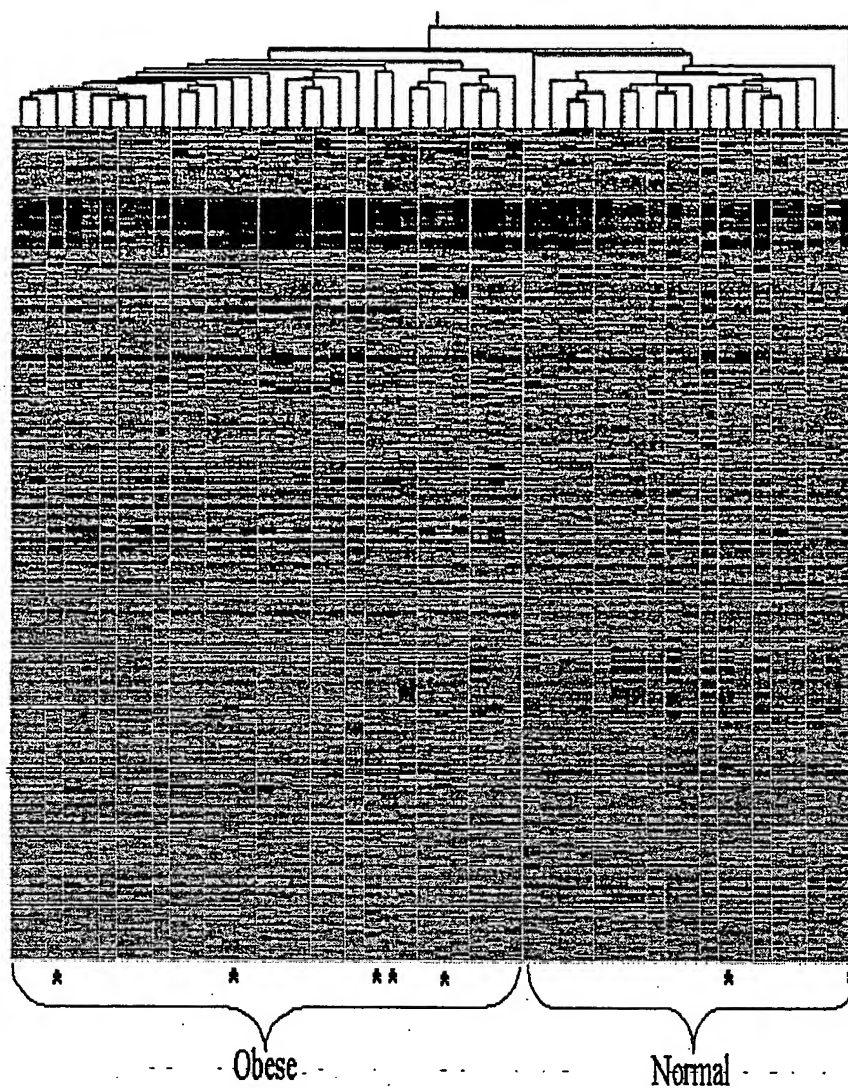
Hypertensive: 19

Normal: 22

Differentially Expressed Genes ($p < 0.05$): 861

Figure 9

Obesity



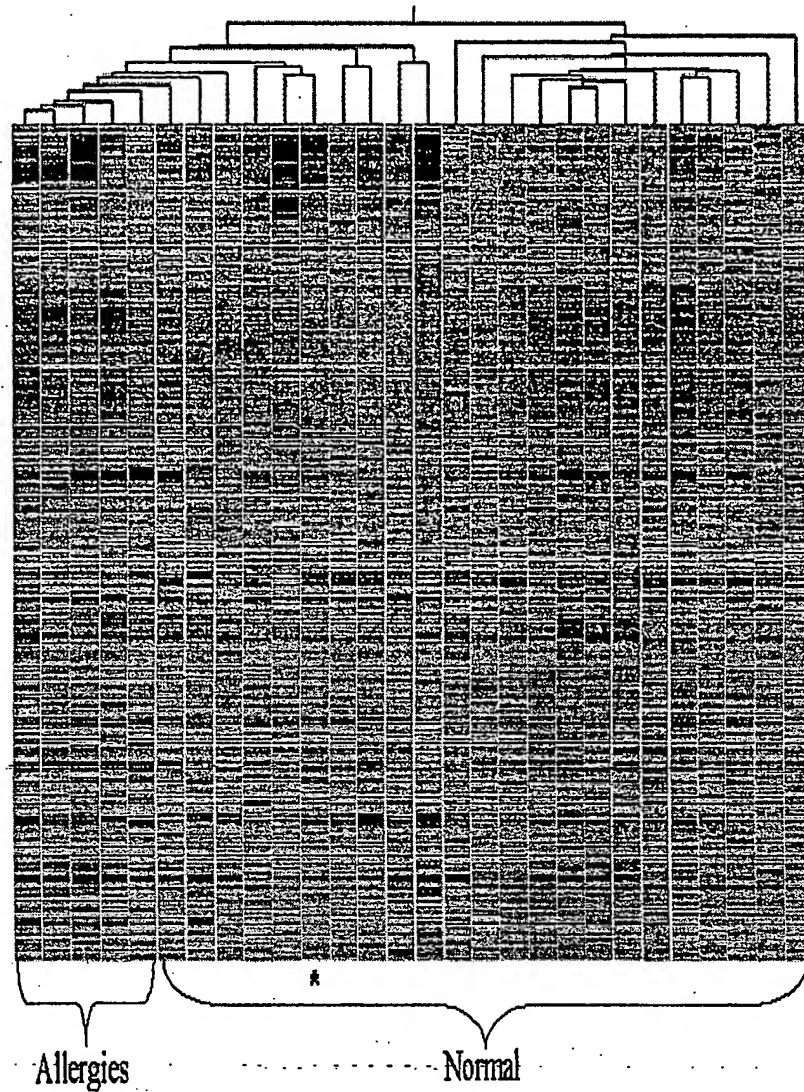
Obese: 25

Normal: 22

Differentially Expressed Genes ($p < 0.05$): 913

Figure 10

Allergies



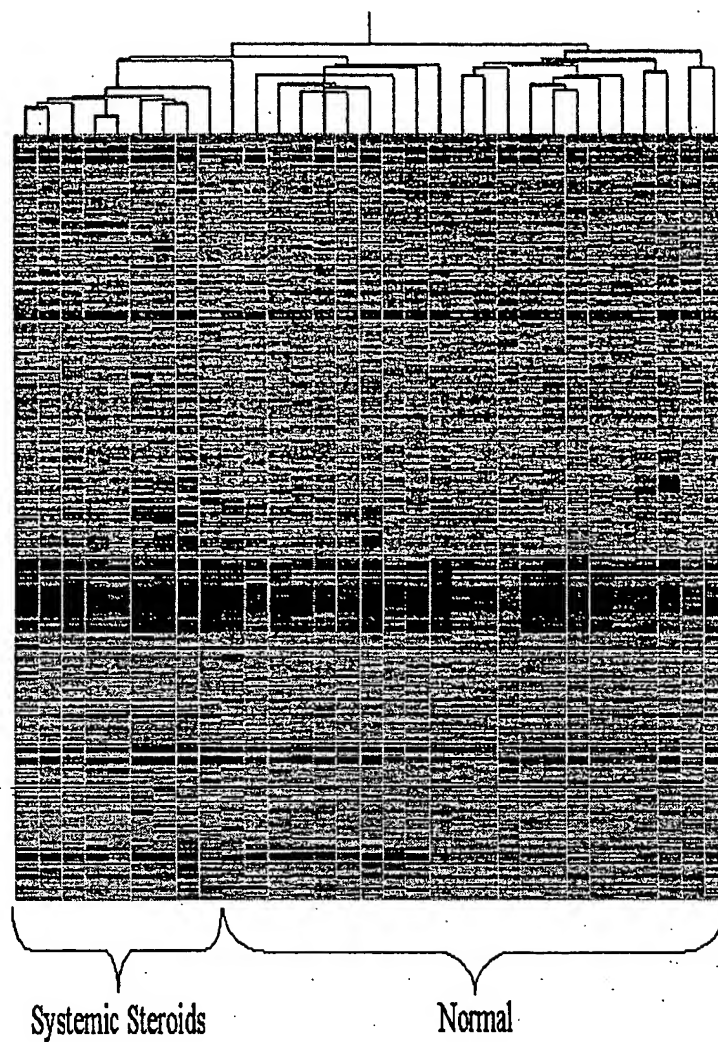
Allergies: 6

Normal: 22

Differentially Expressed Genes ($p < 0.05$): 633

Figure 11

Systemic
Steroids



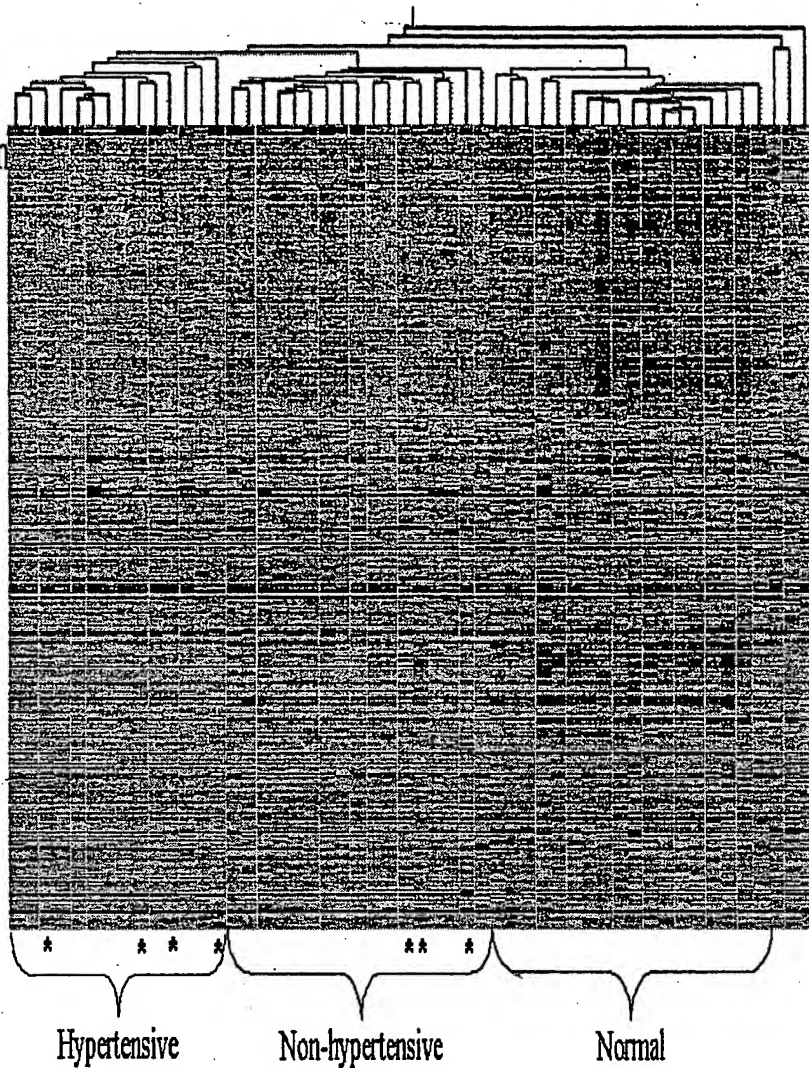
Systemic Steroids: 9

Normal: 22

Differentially Expressed Genes ($p < 0.05$): 605

Figure 12

Hypertension



Hypertensive: 10

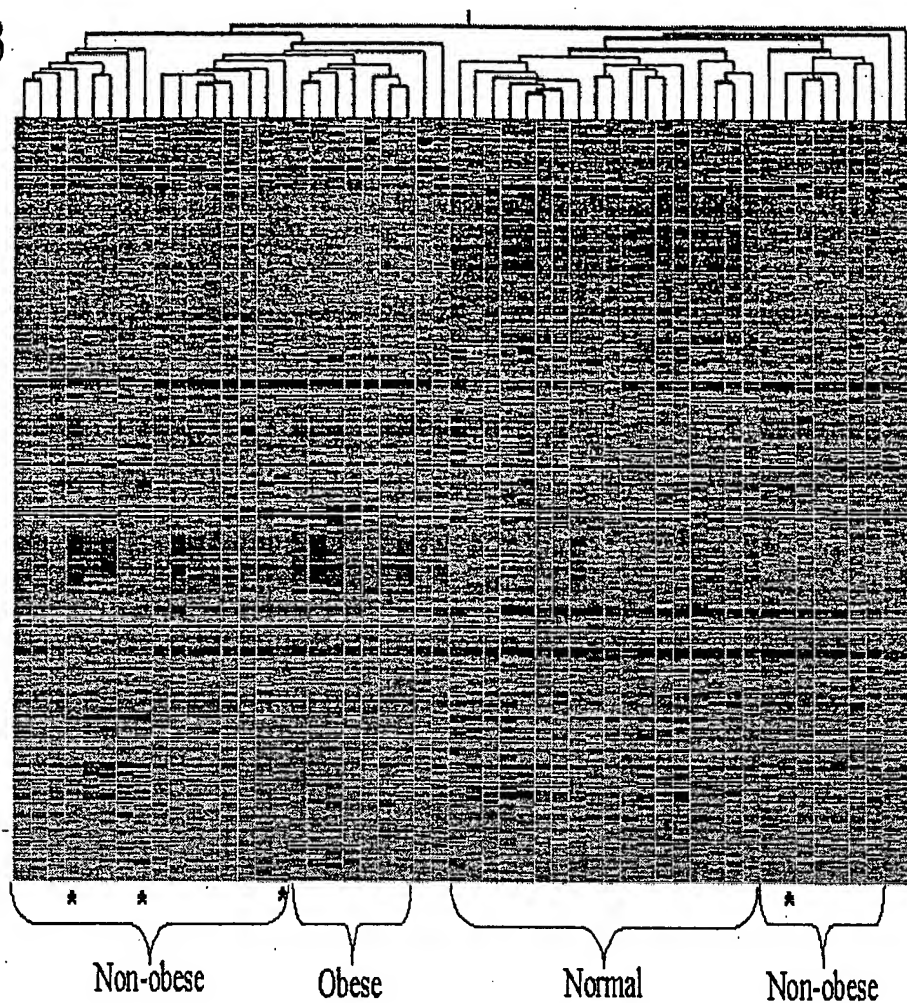
Non-hypertensive: 18

Normal: 24

Differentially Expressed Genes ($p < 0.05$): 1,993

Figure 13

Obesity



Obese: 8

Non-obese: 20

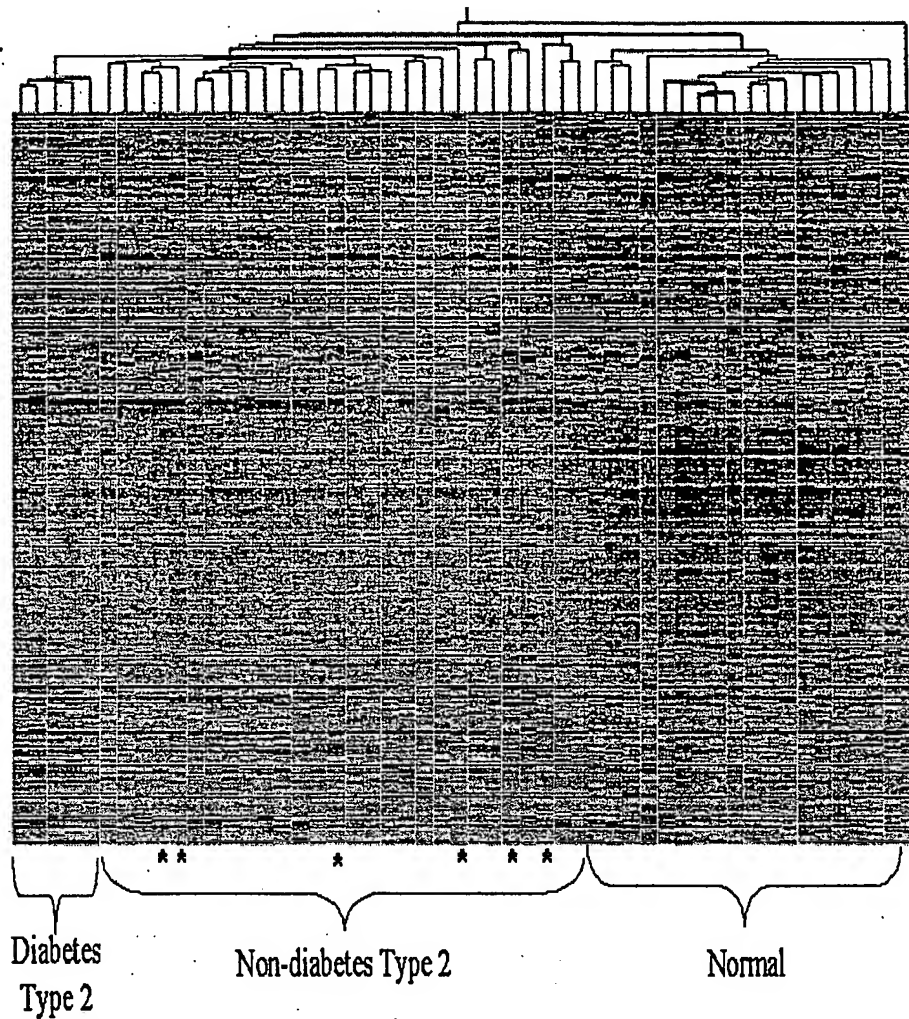
Normal: 24

Differentially Expressed Genes ($p < 0.05$): 1,147

Figure 14

Diabetes

Type 2



Diabetes Type 2: 5

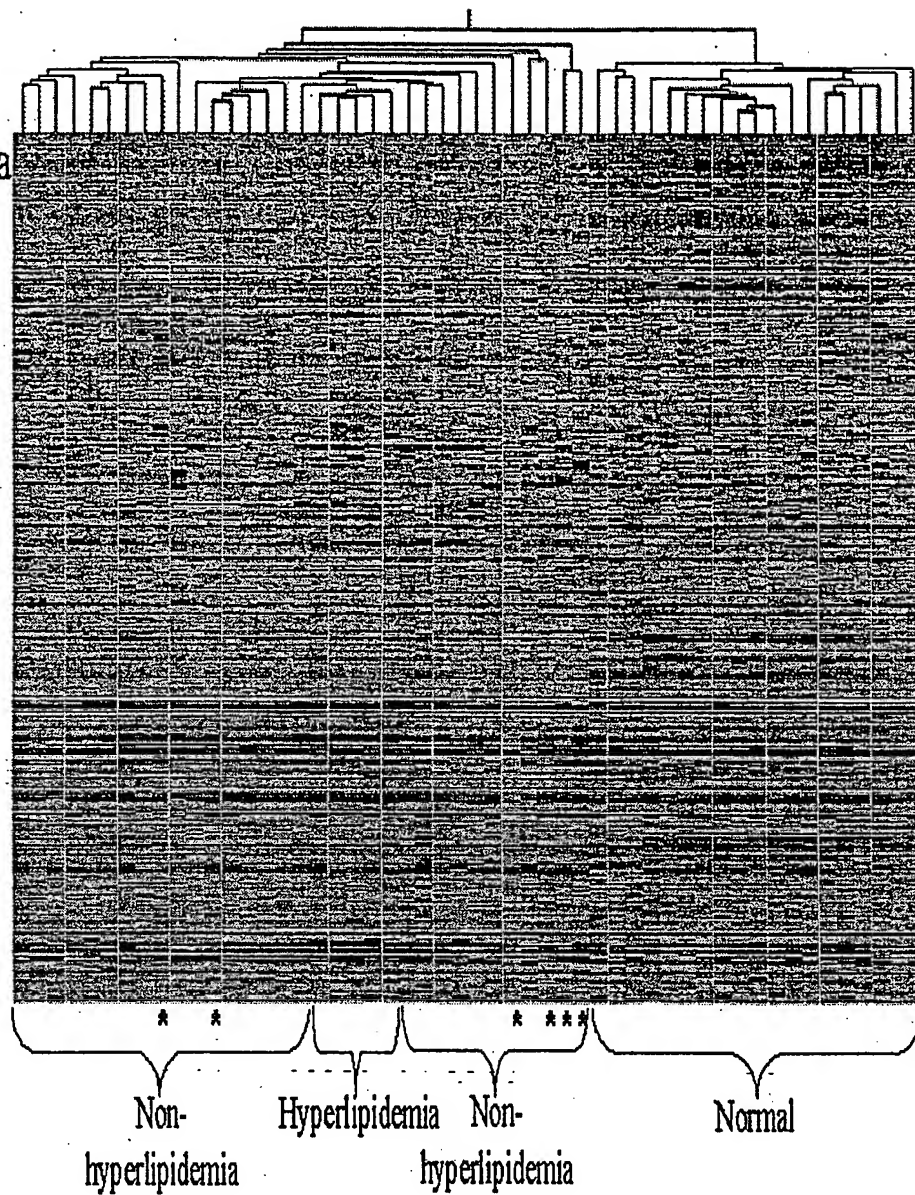
Non-diabetes Type 2: 23

Normal: 24

Differentially Expressed Genes ($p < 0.05$): 915

Figure 15

Hyperlipidemia



Hyperlipidemia: 7

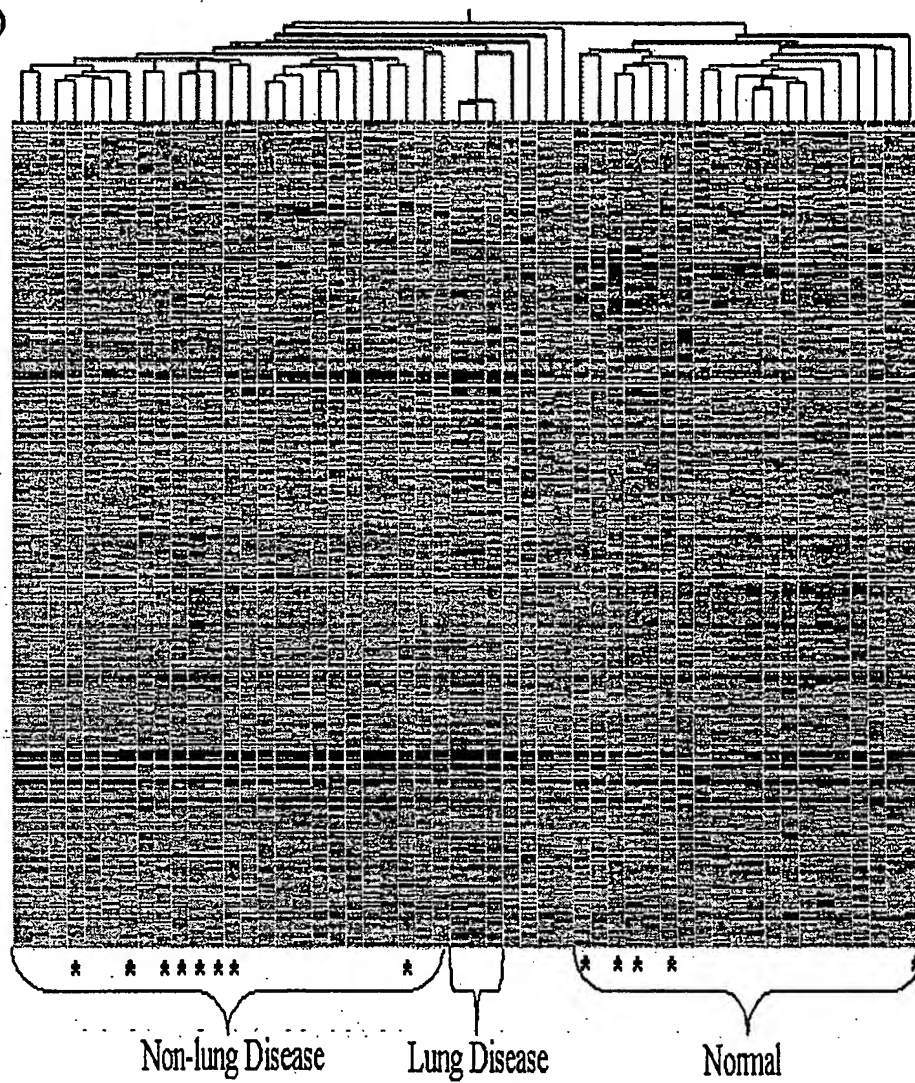
Non-hyperlipidemia: 21

Normal: 24

Differentially Expressed Genes ($p < 0.05$): 1,022

Figure 16

Lung
Disease



Lung Disease: 3

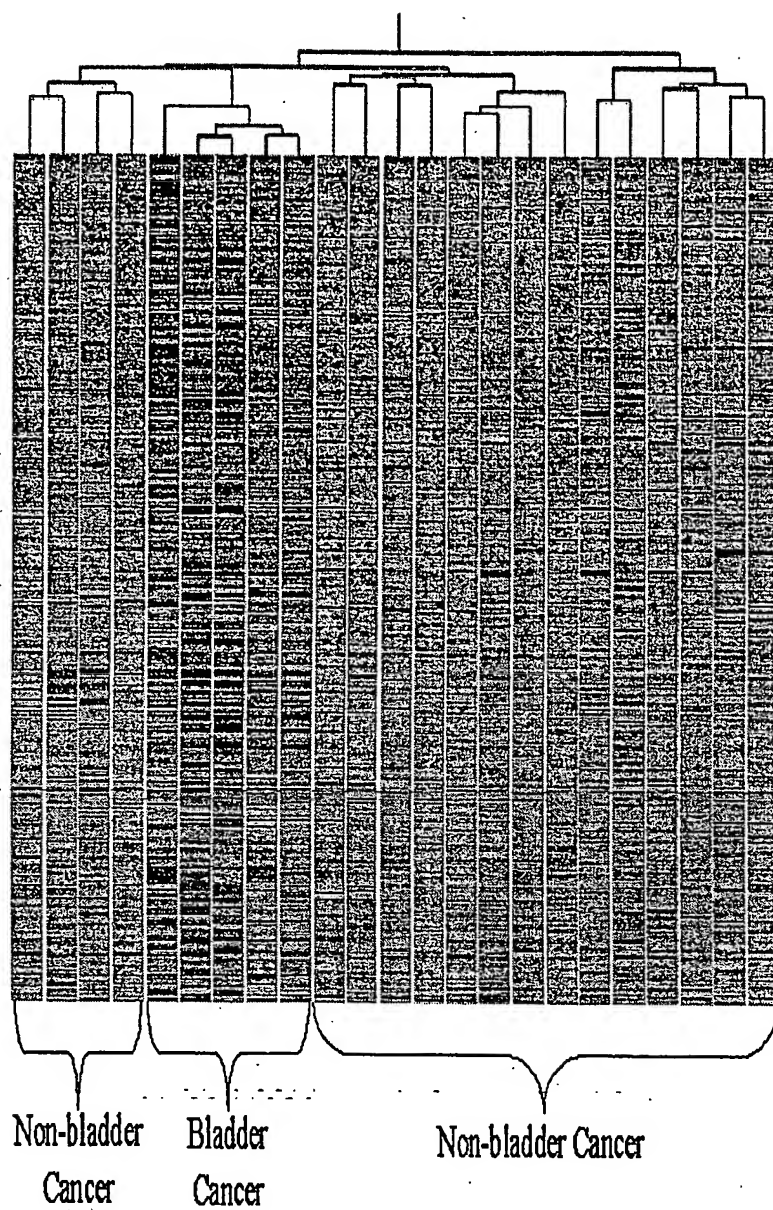
Non-lung Disease: 25

Normal: 24

Differentially Expressed Genes ($p < 0.05$): 596

Figure 17

Bladder
Cancer



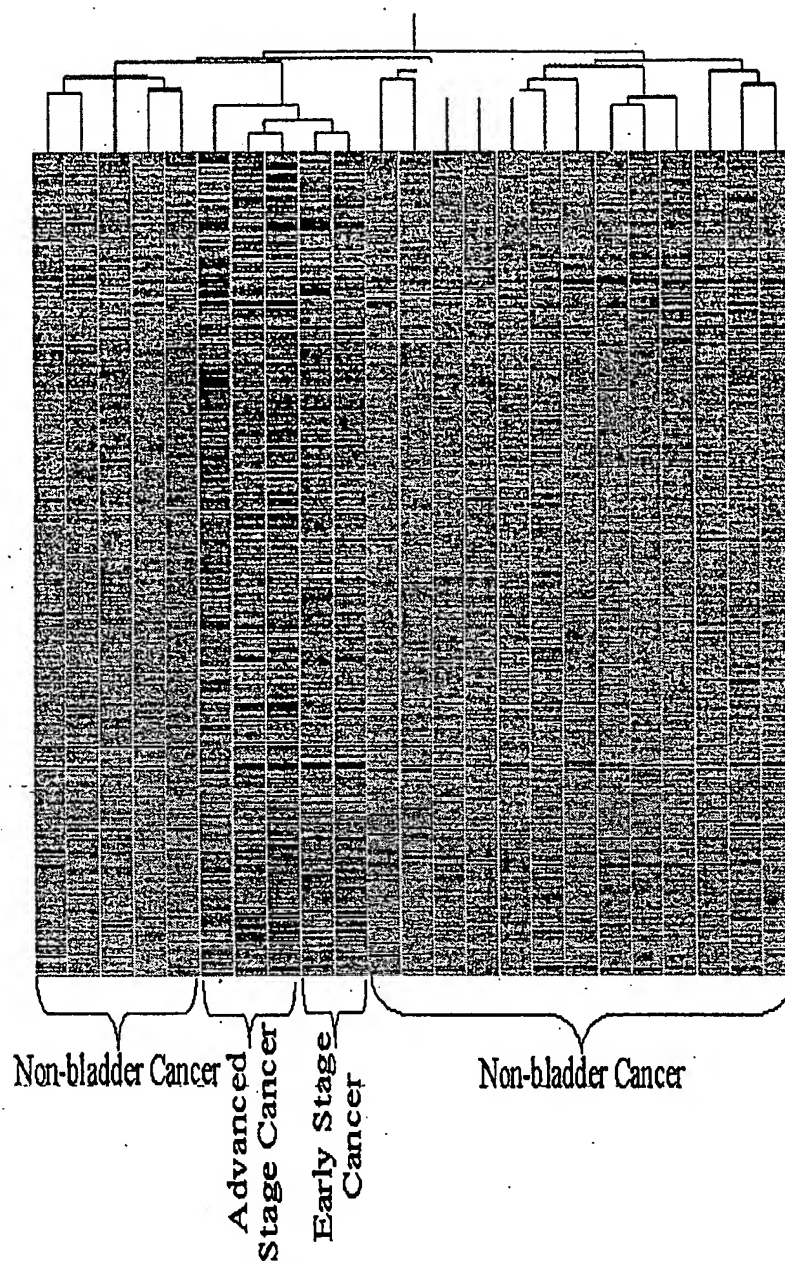
Bladder Cancer: 5

Non-bladder Cancer: 18

Differentially Expressed Genes ($p < 0.05$): 4,228

Figure 18

Bladder
Cancer



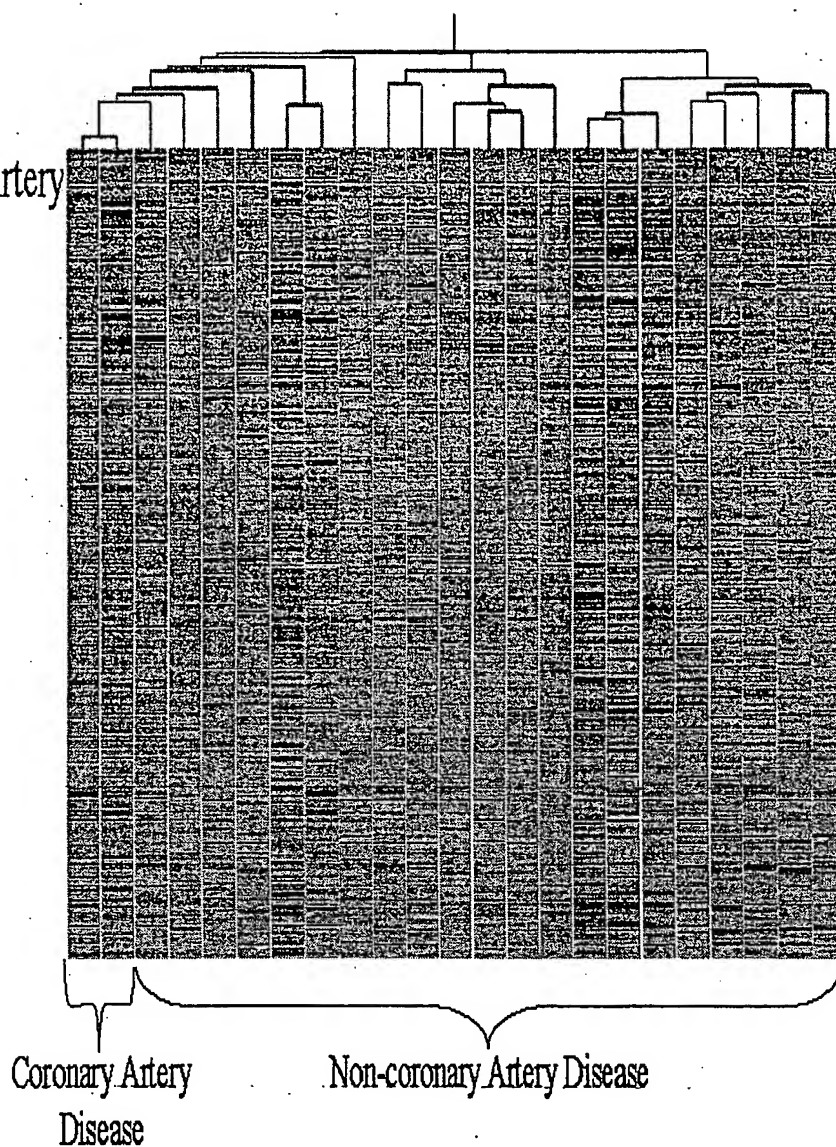
Bladder Cancer: 3 advanced stage, 2 early stage

Non-bladder Cancer: 18

Differentially Expressed Genes ($p < 0.05$): 3,518

Figure 19

Coronary Artery
Disease

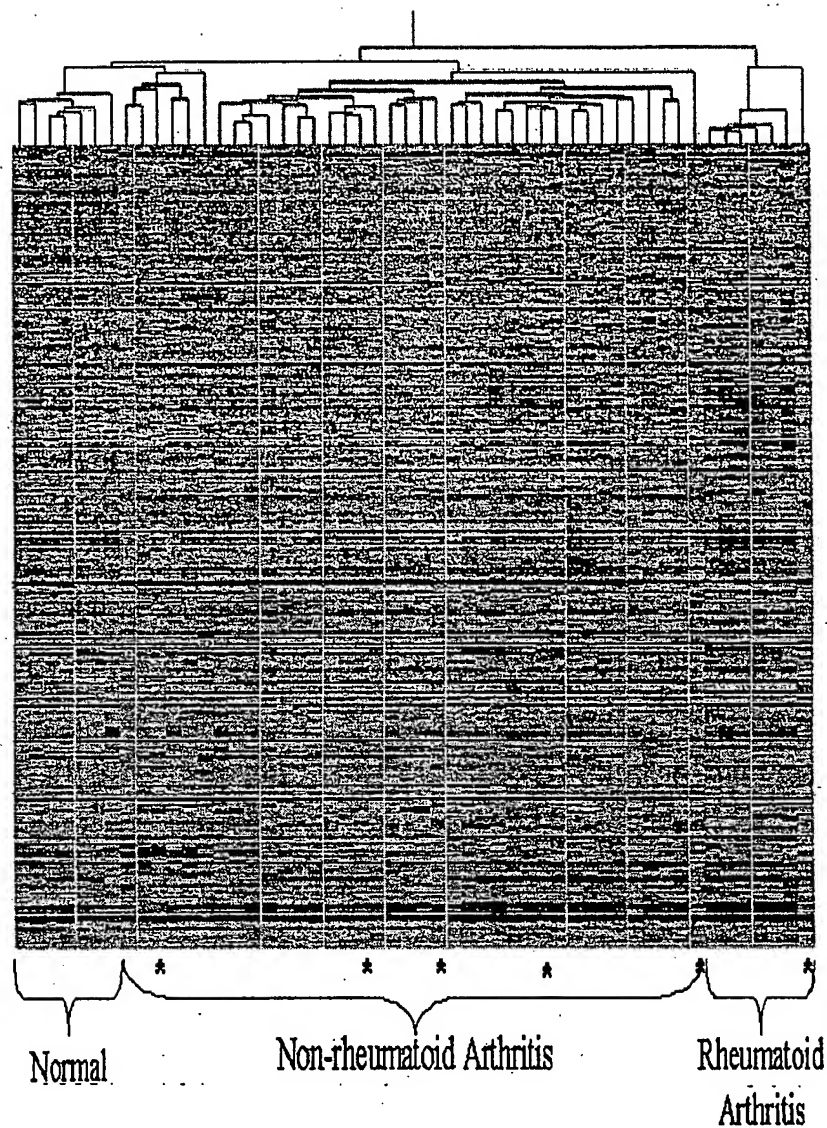


Coronary Artery Disease: 2

Non-coronary Artery Disease: 21

Differentially Expressed Genes ($p < 0.05$): 967

Figure 20
Rheumatoid
Arthritis



Rheumatoid Arthritis: 6

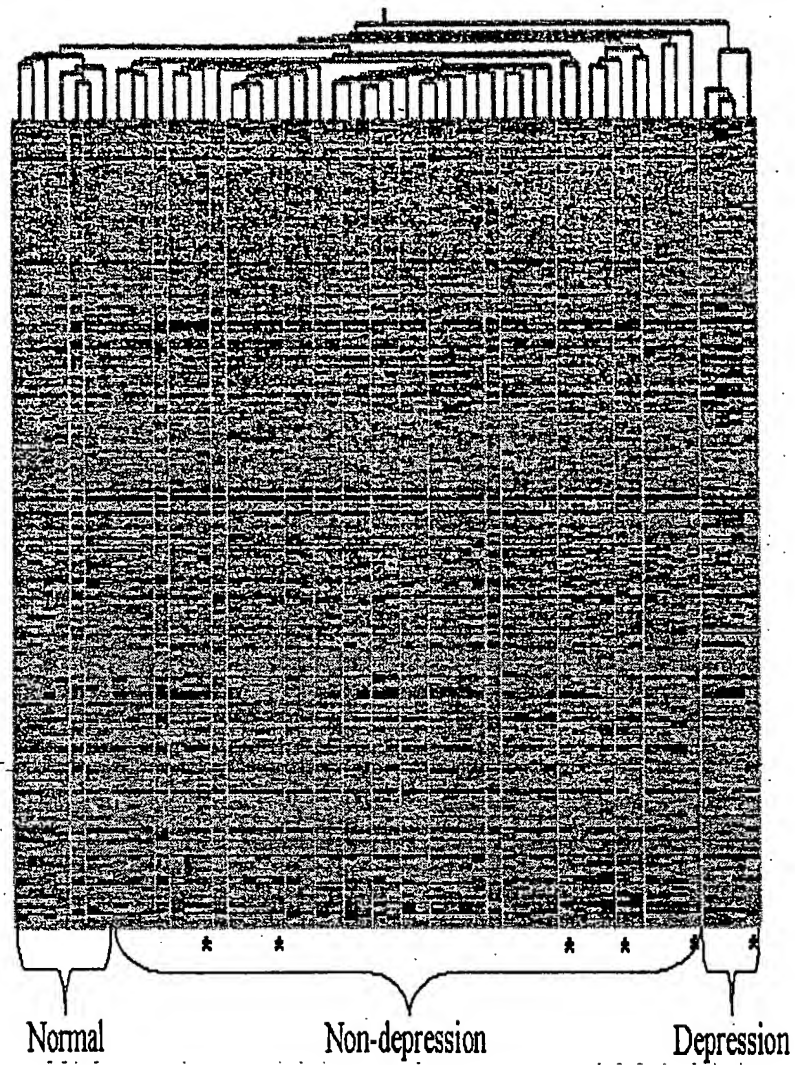
Non-rheumatoid Arthritis: 34

Normal: 12

Differentially Expressed Genes ($p < 0.05$): 2,068

Figure 21

Depression



Depression: 3

Non-depression: 37

Normal: 12

Differentially Expressed Genes ($p < 0.05$): 941

Figure 22
Osteoarthritis

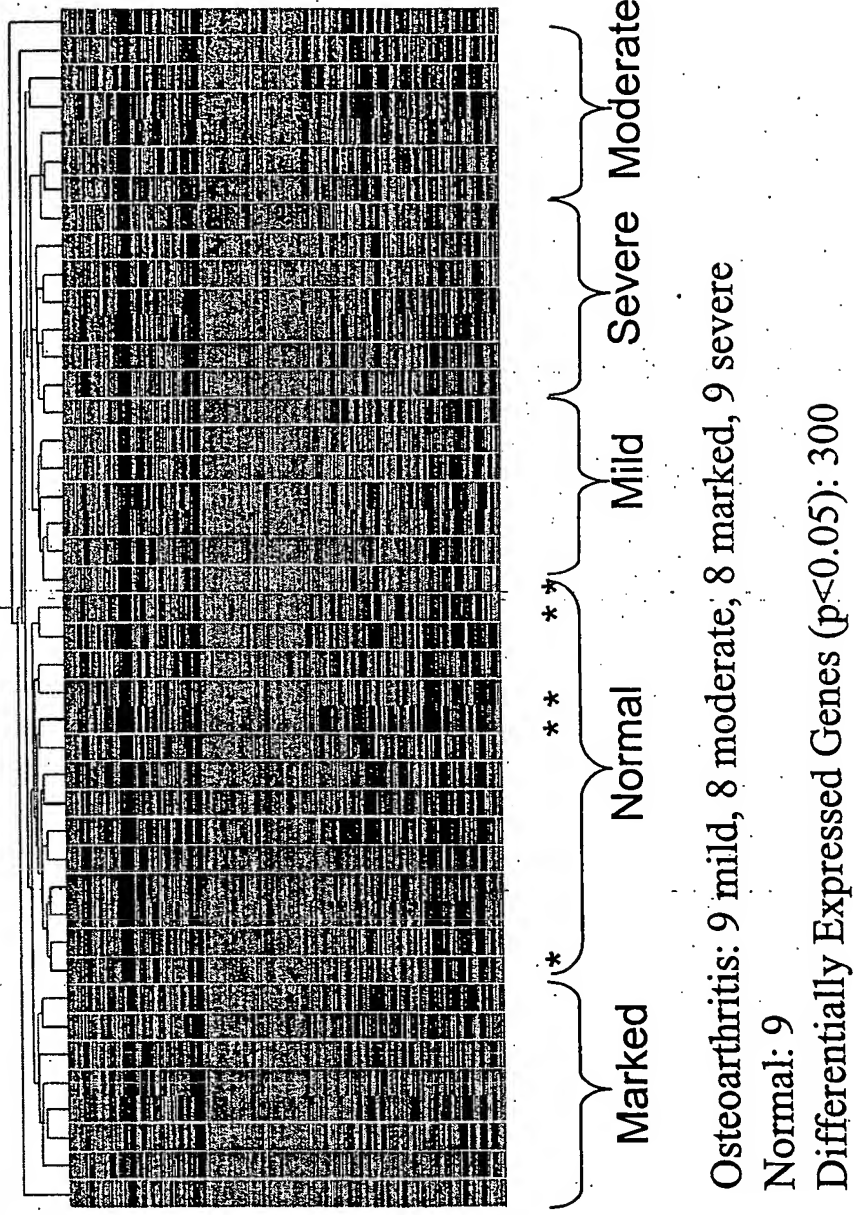


Figure 24

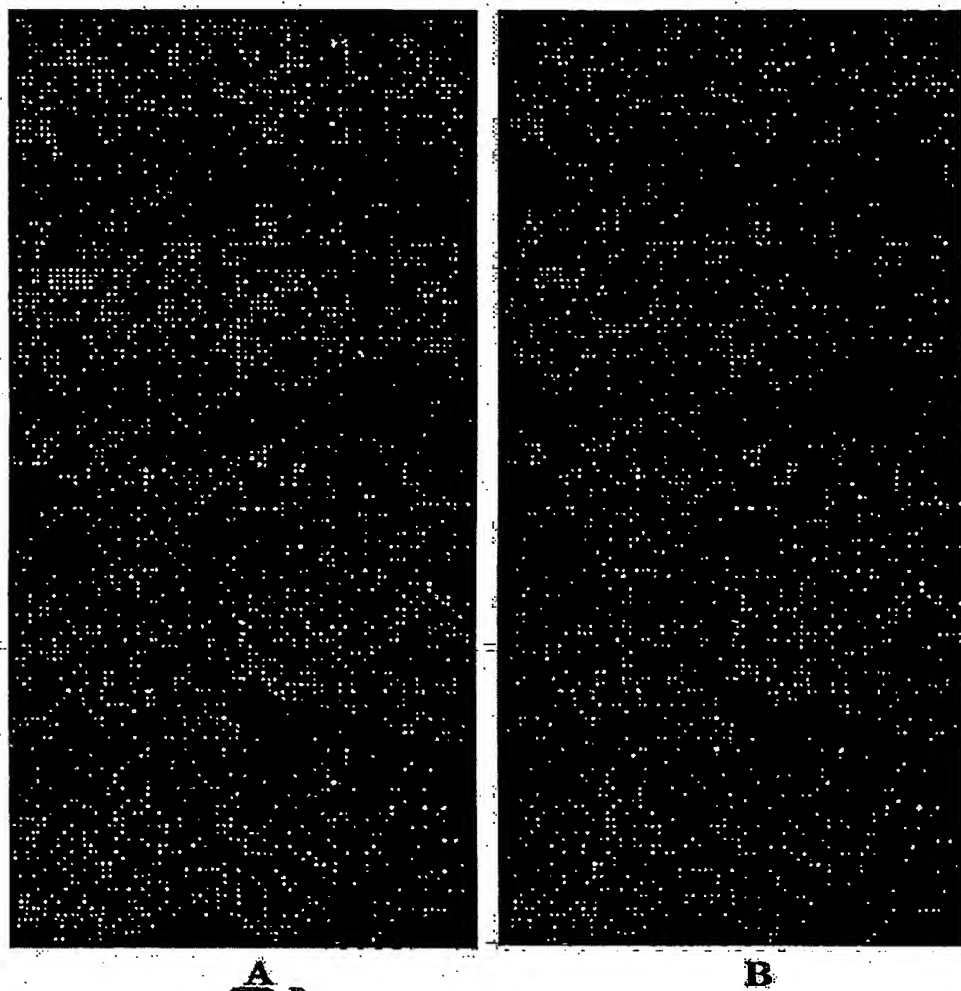
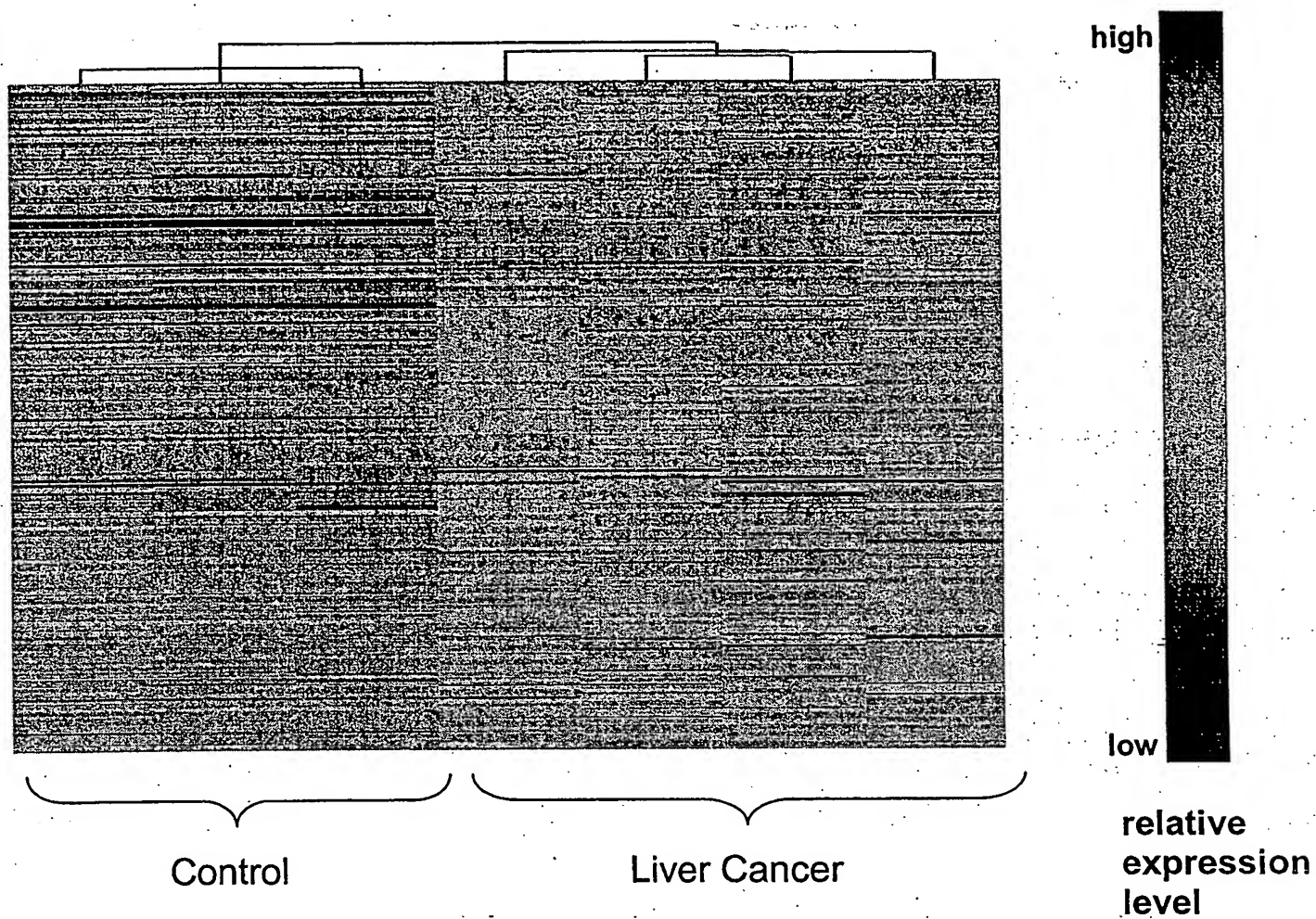


Figure 25

Liver Cancer



Control (red): n=3; Liver Cancer (orange): n=4

Figure 26

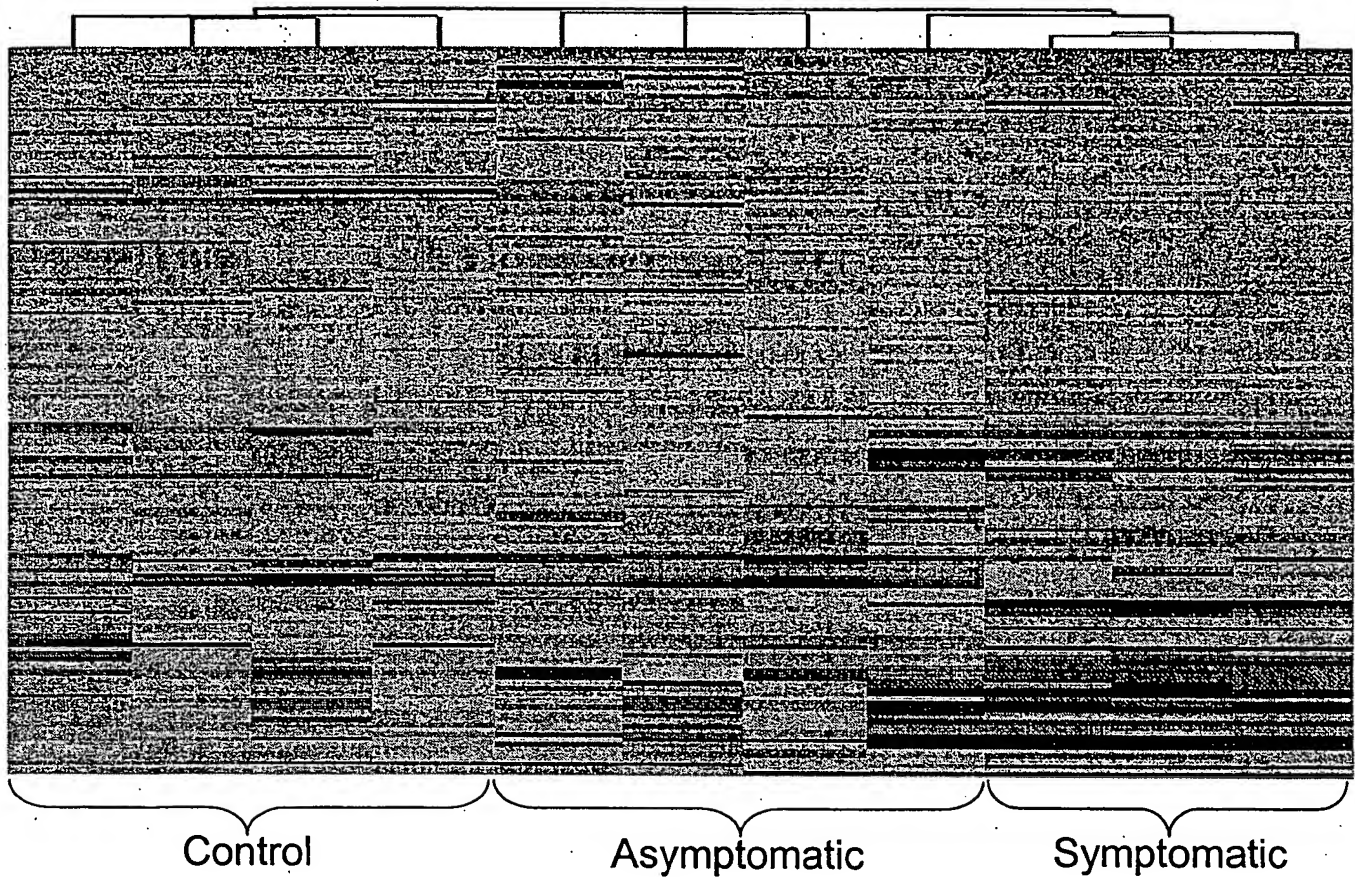
Schizophrenia



Control (red): n=6; Schizophrenia (orange): n=4

$p < 0.005$
252 genes

Figure 27
Chagas Disease

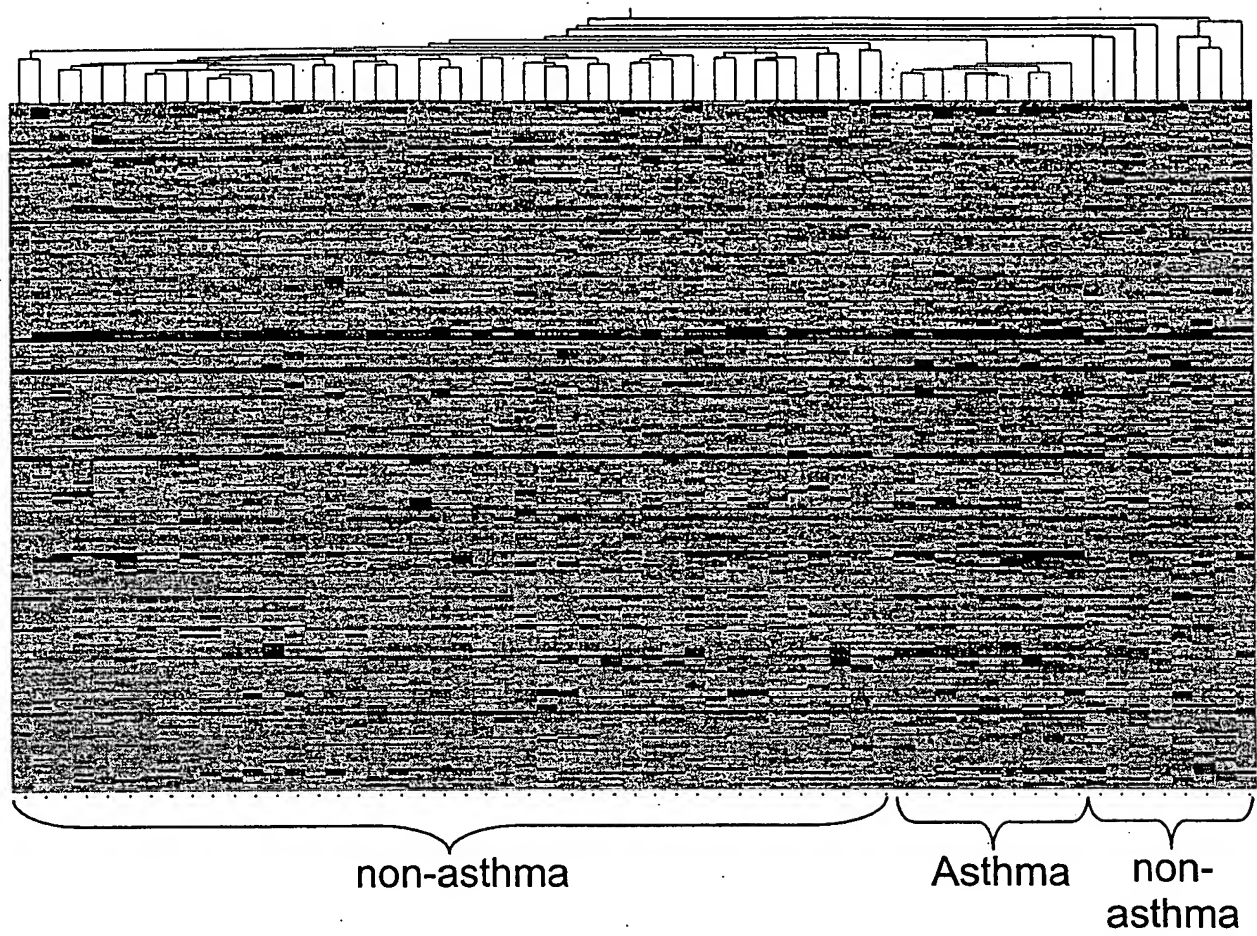


Control (orange): n=4; Chagas' asympt. (red): n=4;
Chagas' sympt. (yellow): n=3

$p < 0.01$
155 genes

Figure 28

Asthma



Asthma: n=9 Non-asthma: n=50

$p < 0.05$
219 genes

Figure 29

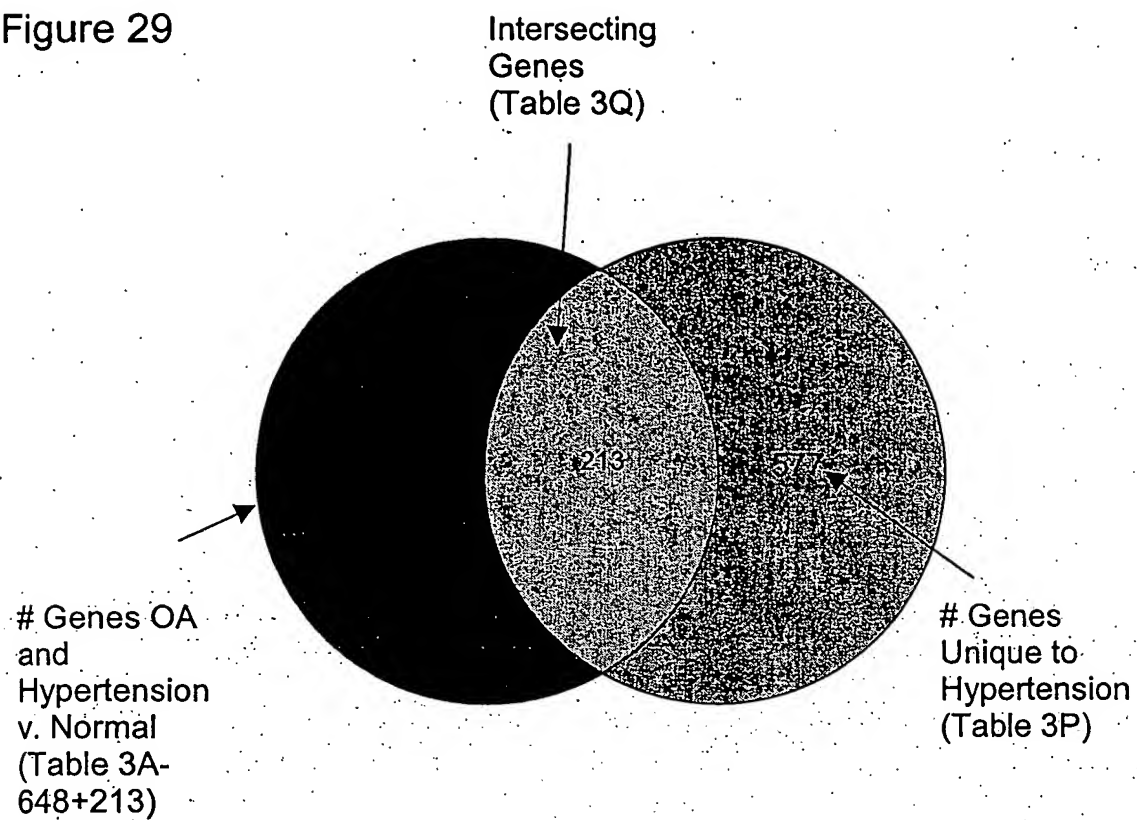


Figure 30

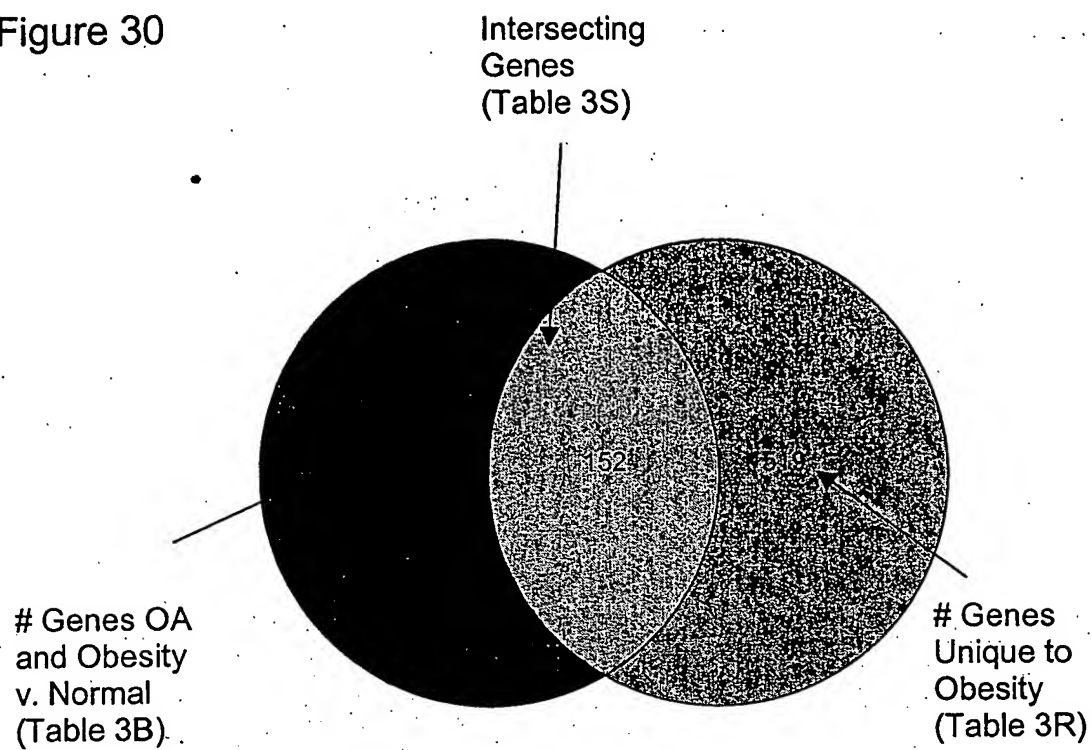


Figure 31

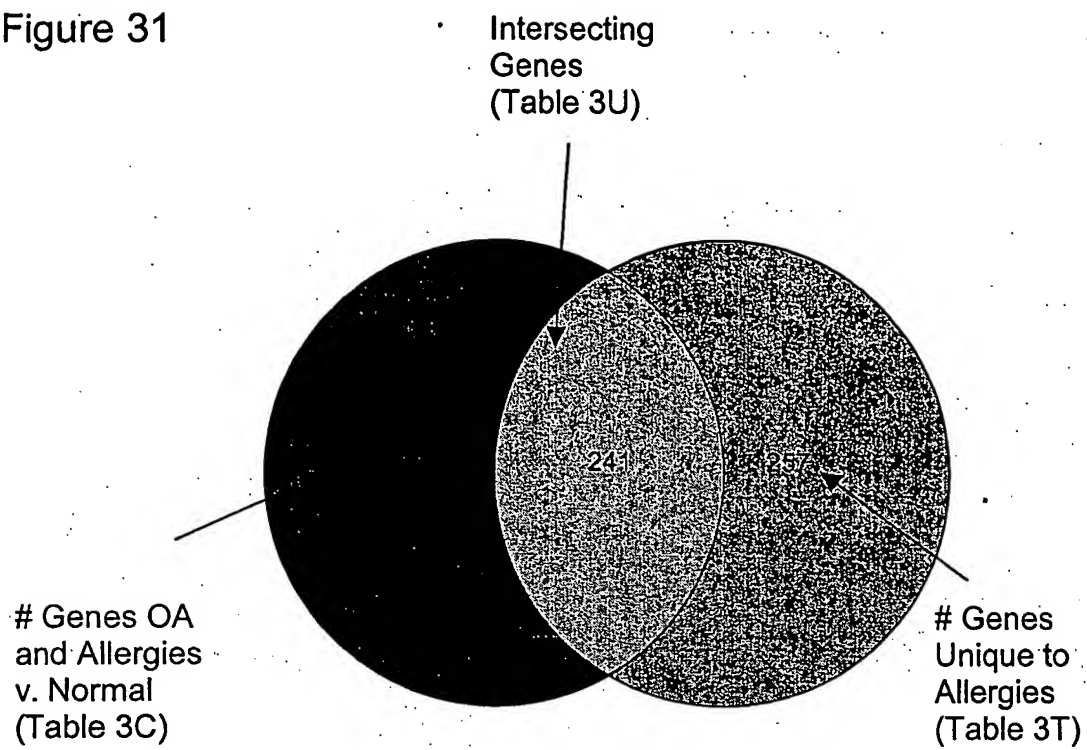


Figure 32

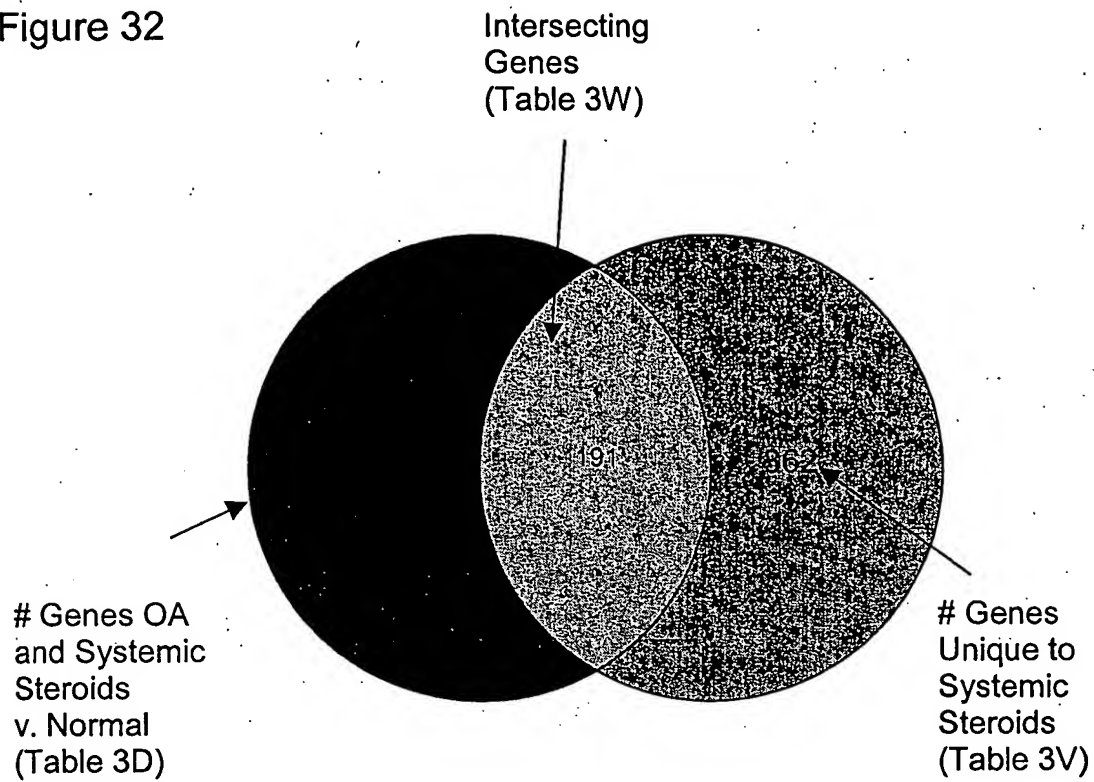
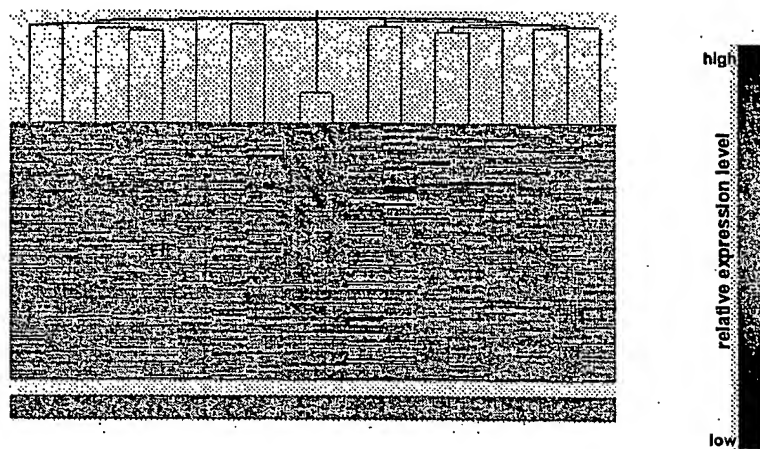


Figure 33

Schizophrenia, Batch 2 vs. MDS



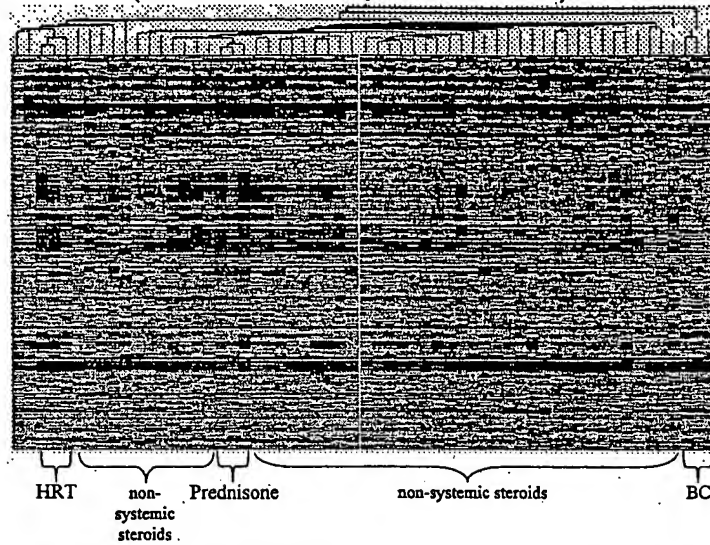
$p < 0.05$
294 genes

Schizophrenia (yellow): $n=16$; MDS (blue): $n=2$

MDS = Manic Depression Syndrome

Figure 34

OA Blood Samples Co-morbidities Study: Systemic Steroid Groups
(n=59: mild OA blood-29, severe OA blood-30)



Systemic Steroids (n=9): 3 prednisone, 3 birth control, 3 hormone replacement therapy

Non-systemic steroids: 50

Differentially Expressed Genes ($p < 0.05$): 396

HRT = hormone replacement therapy; BC = birth control